

**AMENDMENTS TO THE CLAIMS**

1. (Currently Amended) An apparatus for determining a channel state of a set top box, the apparatus comprising:

a sensing stage capable to detect light intensity from various positions on a display and generating output signals based on light intensity detected from each of the various positions;

a comparison stage communicatively coupled to the sensing stage and capable to generate digital values by comparison of each generated output signals with a threshold value;

an interface communicatively coupled to the comparison stage and capable to generate a feedback signal based upon the digital values to indicate a channel state of the set top box; and

an output capable to transmit the feedback signal to a companion box device for processing, wherein the companion box device is configured to detect the channel state of the set top box and based on the channel state, to automatically send a command to the set top box to change the channel of the set top box to a user-specified, pre-programmed channel;

wherein the companion box device is configured and arranged to continuously determine the channel state of the set top box and ensure it matches the user-specified, pre-programmed channel.

2. (Canceled)

3. (Original) The apparatus of claim 1 wherein the sensing stage comprises a plurality of light sensing devices, each of the light sensing devices capable to detect light intensity at a corresponding position on the display.

4. (Original) The apparatus of claim 1 wherein the sensing stage comprises an array of light sensing devices capable to detect light intensity at the various positions on the display.

5. (Canceled)

6. (Currently Amended) A method of determining a channel state of a set top box, the method comprising:

- a) detecting states of light emitting devices in a display of a set top box;
- b) generating an analog value based on each detected state;
- c) comparing each analog value with a threshold value and generating a digital value for each compared analog value;
- d) transmitting to a companion box device a bit stream having the generated digital values to permit the companion box device to determine a channel state of the set top box; and
- e) receiving a signal from the companion box device that causes the set top box to change the channel to a user-specified, pre-programmed channel if the channel state of the set top box indicates that the set top box is not currently tuned to the desired channel;

wherein the method is repeated to continuously determine the channel state of the set top box and ensure it matches the desired channel.

7. (Canceled)

8. (Currently Amended) A set top box channel state system, comprising:

- a device including a plurality of light-sensing elements communicatively coupled to a display of a set top box, the display including a plurality of light emitting devices; and
- a companion box device communicatively coupled to the light-sensing elements, the companion box device including

- an infrared blaster capable to use a code set to send commands via an IR beam to the set top box,

- a character recognition engine capable to determine set top box channel state as displayed on the display based on the output of the light-sensing elements,

- a channel state analysis engine communicatively coupled to the character recognition engine and capable to determine if the channel state matches a desired channel state, and

- a response engine communicatively coupled to the analysis engine and the IR blaster and capable to command the IR blaster, without changing the code set, to send a change

wherein the companion box device is configured and arranged to continuously determine the channel state of the set top box and ensure it matches the desired channel state.



wherein the companion box device is configured and arranged to continuously determine the channel state of the set top box and ensure it matches the particular channel state.

a processor coupled to the feedback interface and the IR blaster, wherein after the IR blaster sends a command to the set top box to change the channel state to a desired channel state, the processor is configured to receive the feedback signal from the feedback interface, and if the channel state does not match the desired channel state, the processor is further configured to cause the IR blaster to send the command to change the channel state to the desired channel state, without changing the set of codes used to send the command;

wherein the companion box device is configured and arranged to continuously determine the channel state of the set top box and ensure it matches the desired channel state.

29. (Canceled)

30. (Currently Amended) A method of maintaining a channel state of a set top box, comprising:

detecting the channel state of a set top box based on a display of the channel state on the set top box;

generating signal information indicative of the detected channel state;

transmitting the generated signal information to a companion box for the companion box to determine an initial channel state of the set top box;

continuously repeating the steps of detecting the channel state of the set top box, generating the signal information indicative of the channel state, and transmitting the generated signal information to the companion box to determine a current channel state of the set top box;

comparing the current channel state to the initial channel state; and

sending a command to the set top box to change to the initial channel state if the current channel state is determined to be different than the initial channel state to ensure the current channel states matches the initial channel state.

31. (Previously presented) The method of claim 30, wherein detecting the channel state of the set top box includes detecting a state of light output from light emitting devices in the display showing the channel state of the set top box.

32. (Previously presented) The method of claim 31, wherein the signal information is generated from detecting the state of the light output from the light emitting devices.

